

ABSTRACT

A composite material (10) formed of a ceramic matrix composite (CMC) material (12) protected by a ceramic insulating material (14). The constituent parts of the
5 insulating material are selected to avoid degradation of the CMC material when the two layers are co-processed. The CMC material is processed to a predetermined state of shrinkage before wet insulating material is applied against the CMC material. The two materials are then co-fired together, with the relative amount of shrinkage between the two materials during the firing step being affected by the amount of pre-shrinkage of the
10 CMC material during the bisque firing step. The shrinkage of the two materials during the co-firing step may be matched to minimize shrinkage stresses, or a predetermined amount of prestress between the materials may be achieved. An aluminum hydroxyl chloride binder material (24) may be used in the insulating material in order to avoid degradation of the fabric (28) of the CMC material during the co-firing step.